

1 CLAIM LISTING

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3 1-14 Canceled

4 15. (New) A weight sensor for an electronic balance, the weight sensor including:

- 5 (a) a base body;
- 6 (b) a load receiver spaced apart from the base body along a first axis;
- 7 (c) guide members connected between the base body and the load receiver so that the
- 8 load receiver is movable along a second axis with respect to the base body, the
- 9 second axis being perpendicular to the first axis;
- 10 (d) an elongated first force-translating element coupled to the load receiver to receive a
- 11 deflecting force in response to a load acting on the load receiver along the second
- 12 axis, the first force-translating element being located asymmetrically relative to a
- 13 sensor plane which is defined by the first and second axes and which
- 14 symmetrically divides the load receiver; and
- 15 (e) a coil through which an electrical current is applied to compensate a deflection of
- 16 the first force-translating element induced by the load acting on the load receiver,
- 17 (f) wherein the first force-translating element, base body, load receiver, and guide
- 18 members are monolithically formed.
- 19

20 16. (New) The weight sensor of claim 15 further including at least one additional force-

21 translating element coupled to receive a respective deflecting force in response to the load

22 acting on the load receiver.

1 17. (New) The weight sensor of claim 16 further including at least two additional force-
2 translating elements, and wherein the first force-translating element and at least two
3 additional force-translating elements are arranged together in a spiral shape when viewed
4 in a direction perpendicular to the sensor plane.

5
6 18. (New) The weight sensor of claim 17 wherein one of the additional force-translating
7 elements represents a final force-translating element, and wherein the final force-
8 translating element or an extension thereof penetrates the spiral shape.

9
10 19. (New) The weight sensor of claim 15 further including a projecting part extending from
11 the base body toward the load receiver, the projecting part providing a respective bearing
12 point for the first force-translating element.

13
14 20. (New) The weight sensor of claim 19 wherein the projecting part is formed asymmetrically
15 relative to the sensor plane and the first force-translating element extends from one side of
16 the projecting part in a direction perpendicular to the sensor plane.

17
18 21. (New) The weight sensor of claim 19 wherein the projecting part includes at least one
19 gradation along the first axis or in a direction perpendicular to the sensor plane.
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- 1 22. (New) The weight sensor of claim 19 wherein the rigidity of the projecting part in the area
2 of the respective bearing point is qualitatively or proportionally formed according to a
3 force acting at the respective bearing point from the first force-translating element.
4
- 5 23. (New) The weight sensor of claim 19 wherein at least one section of the projecting part
6 occupies a maximum height between the guide elements along the second axis.
7
- 8 24. (New) The weight sensor of claim 15 further including at least one additional force-
9 translating element and wherein the respective force-translating elements are defined
10 between cutouts which are cut in from only one machining side of the weight sensor.
11
- 12 25. (New) The weight sensor of claim 15 wherein the guide elements have no cutouts along
13 the second axis.
14
- 15 26. (New) The weight sensor of claim 15 wherein the coil is positioned such that it is
16 symmetrically divided by the sensor plane.
17
- 18 27. (New) The weight sensor of claim 15 further including a lever coupled to the first force-
19 translating element, wherein the coil is mounted on the lever at a location spaced apart
20 along the first axis from the coupling between the lever and the first force-translating
21 element, and wherein the lever is formed separately from the first force-translating
22 element.

1 28. (New) The weight sensor of claim 27 wherein the lever is coupled to the first force-
2 translating element through an additional force-translating element.

3
4 29. (New) A component for a weight sensor, the weight sensor employing electromagnetic
5 compensation to oppose the deflection of one or more force-translating elements in
6 response to a load acting on a load receiver part of the component, the component
7 including:

8 (a) a base body;

9 (b) a load receiver spaced apart from the base body along a first axis;

10 (c) guide members connected between the base body and the load receiver so that the
11 load receiver is movable along a second axis with respect to the base body, the
12 second axis being perpendicular to the first axis; and

13 (d) an elongated first force-translating element coupled to the load receiver to receive a
14 deflecting force in response to a load acting on the load receiver along the second
15 axis, the first force-translating element being located asymmetrically relative to a
16 sensor plane which is defined by the first and second axes and which
17 symmetrically divides the load receiver,

18 (e) wherein the first force-translating element, base body, load receiver, and guide
19 members are monolithically formed.
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1 30. (New) The component of claim 29 further including at least two additional force-
2 translating elements, the first force-translating element and two additional force-translating
3 elements being arranged together in a spiral shape when viewed in a direction
4 perpendicular to the sensor plane.
5

6 31. (New) The component of claim 29 further including a projecting part extending from the
7 base body toward the load receiver, the projecting part (i) providing a bearing point for the
8 first force-translating element, and (ii) being formed asymmetrically relative to the sensor
9 plane, and wherein the first force-translating element extends from one side of the
10 projecting part in a direction perpendicular to the sensor plane.
11

12 32. (New) The component of claim 31 further including at least one additional force-
13 translating element and wherein the projecting part provides a respective bearing point for
14 each additional force-translating element.
15

16 33. (New) The component of claim 29 further including a lever coupled to the first force-
17 translating element, wherein the coil is mounted on the lever at a location spaced apart
18 along the first axis from the coupling between the lever and the first force-translating
19 element, and wherein the lever is formed separately from the first force-translating
20 element.
21

- 1 34. (New) A component for a weight sensor, the weight sensor employing electromagnetic
2 compensation to oppose the deflection of one or more force-translating elements in
3 response to a load acting on a load receiver part of the component, the component
4 including:
- 5 (a) a base body;
 - 6 (b) a load receiver spaced apart from the base body along a first axis;
 - 7 (c) guide members connected between the base body and the load receiver so that the
8 load receiver is movable along a second axis with respect to the base body, the
9 second axis being perpendicular to the first axis;
 - 10 (d) an elongated first force-translating element coupled to the load receiver via a
11 coupling element so as to receive a first deflecting force in response to a load
12 acting on the load receiver along the second axis; and
 - 13 (e) an elongated second force-translating element coupled to the first elongated force-
14 translating element to receive a second deflecting force in response to the load
15 acting on the load receiver,
 - 16 (f) wherein either the first force-translating element or the second force-translating
17 element is located asymmetrically relative to a sensor plane which is defined by the
18 first and second axes and which symmetrically divides the load receiver, and
 - 19 (g) wherein both the first force-translating element and the second force-translating
20 element are monolithically formed with the base body.
- 21

1 35. (New) The component of claim 34 further including a projecting part extending from the
2 base body toward the load receiver, the projecting part (i) providing a respective bearing
3 point for the first force-translating element and for the second force-translating element,
4 and (ii) being formed asymmetrically relative to the sensor plane, and wherein the first
5 force-translating element and second force-translating element each extends from one side
6 of the projecting part in a direction perpendicular to the sensor plane.
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8 36. (New) The component of claim 35 further including a third force-translating component
9 and wherein the projecting part provides a respective bearing point for the third force-
10 translating element.
11

12 37. (New) The component of claim 36 further including a lever connected to the third force-
13 translating element, wherein a coil is mounted on the lever at a location spaced apart along
14 the first axis from the connection between the lever and the third force-translating element,
15 and wherein the lever is formed separately from the third force-translating element.